

Auroras were observed as follows: 1st, Ft. Pembina, Dak.; 5th, Louisville, Ky.; 7th, (?) Cambridge, Mass.; 15th, Escanaba, Mich., Clarksville, Tenn., Gardiner, Me., Rowe, Mass.; 17th, Waltham, Mass., Burlington, Vt.; 18th, Rocky Run and Wautoma, Wis., Portland and Bangor, (very fine) Gardiner and Mechanics' Falls, Me., Plattsburg, N. Y., Contoocookville and Auburn, N. H., Woodstock, Vt., Boston, Mass.; 19th, Cambridge, Mass.; 21st, Wautoma, Wis.; 30th, Starkey, N. Y.

Ground Currents.—Disturbances on lines of telegraph have been reported as follows: 4th, Pike's Peak, Col., and Concho, Texas, (during thunder-storms.)

OPTICAL PHENOMENA.

Solar Halos were observed as follows: 1st, Tex., Ky., Ind. Ter., Ga., 2d, Me., Neb., La., N. Mex. 3d, Ga., Iowa, Ky. 4th, Iowa, Ohio, Ky., La., Ill. 5th, Conn., Mass., N. H., N. Y., Ga., D. C. 6th, Ga. 8th, Ill. 10th, Conn., Mass., N. H., N. Y., R. I., Me. 11th, Conn., Miss., N. H., N. Y., Ga., Mo., La., Fla. 12th, Mo., R. I., Conn. 13th, Ill., Me., Conn. 14th, Ill., Ohio, Texas. 16th, Iowa, Wis., La., Tex. 17th, N. Y., La. 18th, Fla., Va., Ga., Ky. 19th, Conn., Ind., Iowa, Md., N. Y., Ohio, Va., Wis., Ky., N. J., Ill. 20th, Ky., Ohio, Mo. 22d, N. C. 23d, Neb., Ohio, Fla., Kan. 24th, Mo. 25th, Iowa. 26th, Conn., N. J., N. Y., Ohio, Va., R. I., Ky. 27th, Conn., Mass., Ohio, Vt., R. I., D. C., Fla. 28th, N. Y. 29th, Fla., Ga.

Lunar Halos.—12th, Fla.; 13th, Conn., Tex.; 14th, Ill., Mo., Wis., Mo.; 15th, Miss., N. J., Mo., La., Tex.; 16th, Ohio, Minn., Tenn., La., Tex., Ala.; 17th, Fla., N. C., Va., Ga., Mass., Mo., Ala., Minn.; 18th, Fla., Ind., Ky., Md., N. J., Pa., Va., W. Va., Conn., Mo., Wis., Minn., N. C.; 19th, Conn., Ill., Ind., Iowa, Md., Mass., N. J., N. Y., Ohio, Pa., Va., R. I., W. Va., Ky., Mo., Minn., La.; 20th, Fla., Mass., R. I., N. C., Mo., Wis., Minn.; 21st, Md., N. J., Conn., Mo., Wis., Cal.; 22nd, Md., Mich., S. C., Mo., Minn., N. C.; 23rd, Mo., Conn., Minn., Cal.; 24th, Minn., Ohio, Ala., N. C.; 25th, Ind., Me., Md., Ohio, Tenn., W. Va., Mich., Ala., Minn., Idaho, Kan.; 26th, Del., Ind., Iowa., Md., Ohio, Pa., Utah., N. Y., W. Va., Me., Tex.; 27th, Iowa, W. Va., Va., Mo., N. J., D. C.; 28th, Fla., N. J., Ohio.

Mirage.—Tybee Island, Ga., 2nd, 3rd and 6th. New London, Conn., 5th, 9th, 10th, 19th, 22nd, 23rd and 30th.

MISCELLANEOUS PHENOMENA.

BIRDS.—*Ducks*: 3d. Large flocks reported on Lower Fraser river, British Columbia, fully six weeks earlier than usual; Fort Pembina, Dak., S., 22nd; Clear Creek, Neb., and Portland, Or., S., 15th; St. Paul, Minn., S., 24th. *Wild geese*: Fort Randall, Dak., flying S., 18th, 20th; Fort Pembina, Dak., S., 24th; Sedgewick, Kan., SW., 28th; New Bedford, Mass., S., 26th; Fall River, Mass., SW., 23rd; Corning, Mo., S., 15th and 26th to 30th, moving in various directions from river to corn-fields; Clear Creek, Neb., S., 19th; Geneva, Neb., S., 11th; West Charlotte, Vt., S., 26th; Davenport, Iowa, S., 16th; Visalia, Cal., N., 16th; Bismarek, Dak., S., 14th. *Swallows*, Fall River, Mass., had departed, 22nd; Contoocookville, N. H., had left on the 2nd; Auburn, N. H., 10th, and Starkey, N. Y., 16th. *Martins*, Melissa, Tex., had all disappeared 12th. *Blackbirds* and *Robins*, congregating before migration on the 18th, at Wappinger's Falls, N. Y. *Wild Pigeons*, at Jacksonsburg, Ohio, S., 20th. *Whip poor-wills*, Fayette, Miss., flying S., 2nd, 15th and 18th; Auburn, N. H., had departed, 12th. *Pelicans*, Corning, Mo., appeared in large numbers 25th. *Blue-jays*, 24th, Sedgewick, Kan., flying S. *Black birds*, Clear Creek, Neb., flying S., 8th. *Cat birds*, Oregon, Mo., 7th. *Yellow birds*, Oregon, Mo., 20th. *Cranes*, Genoa, Neb., S., 17th; Wappinger's Falls, N. Y., were seen, 2nd; Oregon, Mo., S., 6th. *Heron*, Wappinger's Falls, N. Y., E., 27th. *Plover, quail and partridge*, Wappinger's Falls, N. Y., were seen 2nd to 8th. *Blue birds*, Wappinger's Falls, N. Y., seen flying S. 16th.

INSECTS.—*Grasshoppers*, Tabor, Iowa, none this fall; 11th, becoming numerous at Starkey, N. Y. *Colorado beetles*, Mendon, Mass., abundant during month.

BOTANICAL.—*Maize*, (*Indian Corn*).—5th, Guttenberg, large crop now ripe; 30th, Oregon, Mo., maturing rapidly. *Buckwheat*, ripe at Wappinger's Falls, N. Y., 18th. *Cotton*.—Leaves being eaten by worms at Melissa, Texas, 22nd; Clarksville, Texas, reports worms doing only little damage during early part of month. *Grass*—30th, Oregon, Mo., immense crop of prairie grass hay; great quantities of fodder. *Raspberries*, ripe at West Charlotte, Vt., 22nd.

Polar Bands.—Gardiner, Me., 2d, 20th and 23d. Tybee Island, Ga., 3d and 29th. Guttenburg, Iowa, 4th and 6th. Plattsmouth, Neb., 7th. Wytheville, Va., 9th and 18th. Brookhaven, Miss., 10th. Freehold, N. J., 13th and 26th. Milwaukee, Wis., 14th. Auburn, N. H., 16th. Louisville and Danville, Ky., and Vineland, N. J., 19th. Woodstock, Vt., 20th.

Sunsets.—The characteristics of the sky, as indicative of approaching fair or foul weather, have been observed daily at sunset at all regular Signal Service stations. Reports from 105 stations show 76 blank or doubtful cases, and that out of the remaining 3,074 cases, 2,551, or 83.0 per cent., were followed by the expected weather.